

# **An On-Farm Survey of Swine Feeds and Feed Ingredients for *Salmonella*, and Identification of Associated Herd Risk Factors**

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Research during the last year has centered on conducting a survey for the occurrence of *Salmonella* spp. in the feed and feed environment on the pig farm and identifying risk factors which may be related to such occurrence.

## **METHODS**

Samples of feed and feed ingredients were collected from 30 pig farms in eight states and cultured for the presence of *Salmonella* spp. Information was collected on physical and managerial characteristics of each farm for risk factor analysis.

## **RESULTS**

Salmonellae were isolated from at least one feed or ingredient in 14 (47%) of the 30 herds surveyed, representing five states. Of a total of 1264 samples, salmonellae were recovered from 36 (2.9%). Thirteen different serotypes and two that were untypable were found. The isolation of *Salmonella* spp. in the feed had a statistically significant association with six of the herd characteristics surveyed, including the lack of bird-proofing measures employed on the farm ( $p=0.03$ ), using finisher feed that was prepared on the farm versus purchasing such feed ( $p=0.008$ ), and housing pigs in facilities other than total confinement for the growing ( $p<0.025$ ), finishing ( $p<0.025$ ), gestation (OR=27, 95%CI:1.305-555.57), and breeding ( $p<0.005$ ) stages of production.

## **CONCLUSIONS**

Salmonellae were relatively easy to isolate in the farm feed environment when even a relatively small sample size, compared to the overall volume of feeds and ingredients on the farm, was taken. Certain management practices may be related to the occurrence of *Salmonella* spp. in the farm feed environment.